

ZACARESCU, S. ✓
~~SOURCE (in caps)~~; Given Names

Country: Rumania

Academic Degrees: Engineer

Affiliation: -not given-

Sources: Bucharest, Stiinta si Tehnica (Supplement), No 4, 1961, pp 6.

Data: "12 April 1961 Opened Up Fabulous Prospects."

~~XXXXXXXXXX, N1~~ ✓
~~SURNAME (in caps); Given Names~~

Country: Rumania

Academic Degrees: Engineer

Affiliation: -not given-

Source: Bucharest, Stiinta si Tehnica, No 5, 1961, pp 12-33.

Data: "Combination Aviation Engines."

ZAGANESCU, Fl.
SURNAME, Given Names

Country: Rumania

Academic Degrees: Engineer, Candidate in Technical Sciences (Candidat in Stiinte Tehnice).

Affiliation: -not given-

Source: Bucharest, Stiinta si Tehnica (Supplement), No 8, Aug 1961, pp 5.

Data: "Vostok-2, the Prototype of Piloted Ships."

88321

R/002/60/000/012/002/003

A125/A026

26.1130

AUTHORS: Teodorescu-Tintea, C., Zăgănescu, Fl., Engineers

TITLE: Lenticular Aerodynes

PERIODICAL: Știință și Tehnică, 1960, No. 12, pp. 20 - 21

TEXT: The article deals with lenticular aerodynes and their principle of operation. Brief reference is made to the first jet aircraft designed by the Romanian engineer H. Coandă in October 1910, and to the advantages of circular wings. The propulsion and lifting of lenticular aerodynes can be accomplished by the "Coanda-effect", which is explained as follows: the jet emitted from the nozzle drives the particles of the surrounding medium where no flap is existing and also the particles of the fluid field located between the jet and the flap. If the jet is long enough, a depression is produced which deflects the jet in the direction of the flap. By using this depression phenomenon, Coandă has defined a new lifting method which consists in the production of such a depression on the upper side of the wing. The lenticular aerodyne is a perfect disc (circular wing) having the passenger cabin right in the center. Between the edge and the cabin there are four nozzles, symmetrically arranged on the axes of the wing. By forcing a jet of compressed air or gas through the nozzle, the Coandă effect appears lifting the air.

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X

88324

Lenticular Aerodynes

R/002/60/000/012/002/003
A125/A/26

craft. The lenticular aerodyne is equipped with a gyroscope, located in the lower center of the wing. Forward flying is accomplished by tilting the aerodyne, similar to the blades of a helicopter. Changes in direction are achieved by modifying the jet pressure. The aerodyne can move in every direction and even hover in the air. Finally, the authors mention the utilization possibilities of aerodyne. There are 6 figures. X

Card 2/2

ZAGANESCU, Florin

SURNAME, Given Names

Country: Rumania

Academic Degrees: -Engineer.- Candidate in Technical Sciences (Candidat in Stiinte Tehnice).

Affiliation: -not given-

Source: Bucharest, Stiinta si Tehnica, Vol XIII, No 10, Oct 1961, pp 32-33.

Data: "Ultrasounds in Machine Construction."

GPO 981643

R/002/62/000/012/003/003
D272/D308

AUTHORS: Curelea, S. and Zăgănescu, Fl., Engineers

TITLE: The applications of cybernetics in space

PERIODICAL: Stiința și Tehnica, no. 12, 1962, 40-41

TEXT: Starting with a brief summary of the points raised by Andrei Prokhorov, Member of the Presidium of the Scientific Council for Cybernetics of the USSR Academy of Sciences, on the applications of cybernetics in space technology, this problem is described in some detail. The application of electron computers to the design and launching of space ships, the training of astronauts in simulated flight patterns within cybernetically controlled model space ship cabins, and the prelaunching check program performed automatically by cybernetic circuits on each component and on all combinations within the actual rockets, as well as the control of the flight itself, are considered. There are 4 figures.

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R/002/62/000/008/002/003
D272/D308

13.2000

AUTHOR: Zăgănescu, Florin, Engineer, Candidate of Technical Sciences

TITLE: 'Vostok-3' - 'Vostok-4' in simultaneous flight

PERIODICAL: Știința și tehnica, no. 8, 1962, 24 - 25, 45

TEXT: After a brief presentation of the intricate technological operation of a rocket launching in its various phases, the achievement of precise launching of a second rocket is examined which follows the first 24 hours later in practically the same orbit. Based on the experience gathered in seven previous satellite launchings in the 'Cosmos' series, it was possible to attain, 13 hours before group landing, a difference of 9 seconds in the revolution periods, of 10 km in the apogees, of 1 km in the perigees and of 2 minutes in the inclination angles of the two orbital planes. The various major and minor achievements, including communication between the cosmonauts themselves, and between them and the earth, are enumerated, and their importance for future space launchings, especially

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'Vostok-3' - 'Vostok-4' ...

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in view of constructing launching platforms or scientific observatories in space is discussed. There are 3 figures.

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6

Card 2/2

~~ZACANESCU~~, Ion, egyetemi tanár

Traction service achievements of the Rumanian Railways
and the perspective of development. Kozl tud sz 13
no.2:56-65 F '63.

1. Bukaresti es temesvari muszaki egyetemek.

ZACANESCU, I., prof.; POPESCU, C., conf.

Corrosion action in railroad diesel engines. Rev calilor fer
12 no. 1: 5-9 Ja '64.

ZAGANESCU, Ion, prof. ing.; POPESCU, Gaius, conf. ing.; BIRSAN, Ion, assist.
ing.

Diesel engines for railroads of secondary lines. (R.1. Rev.
cailor fer 12 no. 32127-133 1964

ZAGANESCU, Ion, prof. ing.; POPESCU, Caius, conf. ing.; BIRSAN, Ion,
Asist. ing.

Diesel engines for secondary lines. Pt. 2. Rev cailor fer
12 no. 4:179-187 Ap '64.

ZAGANESCU, I.

TECHNOLOGY

REVISTA CAILOR FERATE Vol. 6, no. 9, Sept. 1958.

Modernization of the D² locomotive, constructed at the Reaita Metallurgic
Combinat. p.479.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 3, 2
-May 1959, Unclass.

March

ZAGARESCU, I.; HOANCA, V.

Method of computing the exhaust system with blast pipe in narrow gauge...
locomotives. p.122.

REVISTA CALOR FERATE. (Galle Ferate Romine)
Bucuresti, Rumania
Vol. 7, no. 4, Apr. 1959.

Monthly list of Eastern European Accession Index (EEAI) IC vol. 8, No. 11
November 1959
Uncl.

ZAFANESCU, I., cîntecul lui Ion: Poem, 1927, 1930, 1932, 1934, 1936, 1938, 1940, 1942, 1944, 1946, 1948, 1950, 1952, 1954, 1956, 1958, 1960, 1962, 1964, 1966, 1968, 1970, 1972, 1974, 1976, 1978, 1980, 1982, 1984, 1986, 1988, 1990, 1992, 1994, 1996, 1998, 2000, 2002, 2004, 2006, 2008, 2010, 2012, 2014, 2016, 2018, 2020, 2022, 2024, 2026, 2028, 2030, 2032, 2034, 2036, 2038, 2040, 2042, 2044, 2046, 2048, 2050, 2052, 2054, 2056, 2058, 2060, 2062, 2064, 2066, 2068, 2070, 2072, 2074, 2076, 2078, 2080, 2082, 2084, 2086, 2088, 2090, 2092, 2094, 2096, 2098, 2100, 2102, 2104, 2106, 2108, 2110, 2112, 2114, 2116, 2118, 2120, 2122, 2124, 2126, 2128, 2130, 2132, 2134, 2136, 2138, 2140, 2142, 2144, 2146, 2148, 2150, 2152, 2154, 2156, 2158, 2160, 2162, 2164, 2166, 2168, 2170, 2172, 2174, 2176, 2178, 2180, 2182, 2184, 2186, 2188, 2190, 2192, 2194, 2196, 2198, 2200, 2202, 2204, 2206, 2208, 2210, 2212, 2214, 2216, 2218, 2220, 2222, 2224, 2226, 2228, 2230, 2232, 2234, 2236, 2238, 2240, 2242, 2244, 2246, 2248, 2250, 2252, 2254, 2256, 2258, 2260, 2262, 2264, 2266, 2268, 2270, 2272, 2274, 2276, 2278, 2280, 2282, 2284, 2286, 2288, 2290, 2292, 2294, 2296, 2298, 2300, 2302, 2304, 2306, 2308, 2310, 2312, 2314, 2316, 2318, 2320, 2322, 2324, 2326, 2328, 2330, 2332, 2334, 2336, 2338, 2340, 2342, 2344, 2346, 2348, 2350, 2352, 2354, 2356, 2358, 2360, 2362, 2364, 2366, 2368, 2370, 2372, 2374, 2376, 2378, 2380, 2382, 2384, 2386, 2388, 2390, 2392, 2394, 2396, 2398, 2400, 2402, 2404, 2406, 2408, 2410, 2412, 2414, 2416, 2418, 2420, 2422, 2424, 2426, 2428, 2430, 2432, 2434, 2436, 2438, 2440, 2442, 2444, 2446, 2448, 2450, 2452, 2454, 2456, 2458, 2460, 2462, 2464, 2466, 2468, 2470, 2472, 2474, 2476, 2478, 2480, 2482, 2484, 2486, 2488, 2490, 2492, 2494, 2496, 2498, 2500, 2502, 2504, 2506, 2508, 2510, 2512, 2514, 2516, 2518, 2520, 2522, 2524, 2526, 2528, 2530, 2532, 2534, 2536, 2538, 2540, 2542, 2544, 2546, 2548, 2550, 2552, 2554, 2556, 2558, 2560, 2562, 2564, 2566, 2568, 2570, 2572, 2574, 2576, 2578, 2580, 2582, 2584, 2586, 2588, 2590, 2592, 2594, 2596, 2598, 2600, 2602, 2604, 2606, 2608, 2610, 2612, 2614, 2616, 2618, 2620, 2622, 2624, 2626, 2628, 2630, 2632, 2634, 2636, 2638, 2640, 2642, 2644, 2646, 2648, 2650, 2652, 2654, 2656, 2658, 2660, 2662, 2664, 2666, 2668, 2670, 2672, 2674, 2676, 2678, 2680, 2682, 2684, 2686, 2688, 2690, 2692, 2694, 2696, 2698, 2700, 2702, 2704, 2706, 2708, 2710, 2712, 2714, 2716, 2718, 2720, 2722, 2724, 2726, 2728, 2730, 2732, 2734, 2736, 2738, 2740, 2742, 2744, 2746, 2748, 2750, 2752, 2754, 2756, 2758, 2760, 2762, 2764, 2766, 2768, 2770, 2772, 2774, 2776, 2778, 2780, 2782, 2784, 2786, 2788, 2790, 2792, 2794, 2796, 2798, 2800, 2802, 2804, 2806, 2808, 2810, 2812, 2814, 2816, 2818, 2820, 2822, 2824, 2826, 2828, 2830, 2832, 2834, 2836, 2838, 2840, 2842, 2844, 2846, 2848, 2850, 2852, 2854, 2856, 2858, 2860, 2862, 2864, 2866, 2868, 2870, 2872, 2874, 2876, 2878, 2880, 2882, 2884, 2886, 2888, 2890, 2892, 2894, 2896, 2898, 2900, 2902, 2904, 2906, 2908, 2910, 2912, 2914, 2916, 2918, 2920, 2922, 2924, 2926, 2928, 2930, 2932, 2934, 2936, 2938, 2940, 2942, 2944, 2946, 2948, 2950, 2952, 2954, 2956, 2958, 2960, 2962, 2964, 2966, 2968, 2970, 2972, 2974, 2976, 2978, 2980, 2982, 2984, 2986, 2988, 2990, 2992, 2994, 2996, 2998, 3000, 3002, 3004, 3006, 3008, 3010, 3012, 3014, 3016, 3018, 3020, 3022, 3024, 3026, 3028, 3030, 3032, 3034, 3036, 3038, 3040, 3042, 3044, 3046, 3048, 3050, 3052, 3054, 3056, 3058, 3060, 3062, 3064, 3066, 3068, 3070, 3072, 3074, 3076, 3078, 3080, 3082, 3084, 3086, 3088, 3090, 3092, 3094, 3096, 3098, 3100, 3102, 3104, 3106, 3108, 3110, 3112, 3114, 3116, 3118, 3120, 3122, 3124, 3126, 3128, 3130, 3132, 3134, 3136, 3138, 3140, 3142, 3144, 3146, 3148, 3150, 3152, 3154, 3156, 3158, 3160, 3162, 3164, 3166, 3168, 3170, 3172, 3174, 3176, 3178, 3180, 3182, 3184, 3186, 3188, 3190, 3192, 3194, 3196, 3198, 3200, 3202, 3204, 3206, 3208, 3210, 3212, 3214, 3216, 3218, 3220, 3222, 3224, 3226, 3228, 3230, 3232, 3234, 3236, 3238, 3240, 3242, 3244, 3246, 3248, 3250, 3252, 3254, 3256, 3258, 3260, 3262, 3264, 3266, 3268, 3270, 3272, 3274, 3276, 3278, 3280, 3282, 3284, 3

Infant of deceased, a law-abiding citizen of railroad-trust
vehicles. Kozl has a 14 no. 11506-220. H. 102.

1. Technical University, Dnepropetrovsk and Institute (for Taganrog).

89841

R/002/61/000/005/001/001

D015/D105

26.1100

AUTHOR: Zăgănescu, Fl., Engineer

TITLE: Composite aircraft power plants

PERIODICAL: Știință și Tehnică, no. 5, Seria a II-a, 1961, 32-33

TEXT: The article deals with aircraft equipped with compound engines, the main types of which are enumerated, including a brief description of their advantages. On April 28, 1961 Soviet military pilot Georgiy Mosolov attained an altitude of 34,200 m with a "E-66" single-engine turbojet airplane. Tentative conquest of higher altitudes with jet aircraft, such as turbojets, ramjets, and pulsejets, presents a problem difficult to solve since combustion, inside the combustors, lacks the necessary amount of air. Therefore, flights beyond the atmosphere can only be performed by planes which can carry the necessary fuel and oxidant. These requirements are met by rockets which, in accordance with the Soviet Scientist Tsiolkovskiy, will be the means used by man in conquering space. Since a rocket engine has a high fuel consumption it cannot power an aircraft over an extended period. The problem is to combine various engine types to obtain superior characteristics within given conditions. In

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D015/D105

Composite aircraft power plants

spite of the fact that in 1910, Henri Coandă, a Rumanian scientist tested the first jet aircraft, conventional internal-combustion piston engines continued in use up to 1945. With turbojets capable of excellent performance at speeds over 700 km/h and at an altitude of 7,000 m and with Tupolev's successful development of the Tu-104, Tu-110, Tu-114 and Tu-124 it became necessary to modernize the piston engine. This resulted in the compound engine consisting of three low-power turbines driven by exhaust gases connected to the crankshaft. The turbines are small and the exhaust gases enter each turbine through 3 double pipes. Each turbine is cooled by a device composed of a cover under which the air originating from the flight speed flows. A compound engine shown in Fig. 4 represents a further step in the development of turboprop engines which are used in the "Moskva" IL-18 and the "Rossiya" Tu-114 aircraft. A new type of engine, the bypass engine which powers the Tu-124 is becoming a rival of turboprop engines. A ramjet which has an excellent performance at M 3.5 at an altitude of 20-25 km cannot, however, be used for low-speed flights since the operation of its engine, having no compressor, is based on the dynamic pressure of the air. The rocket engine fueled by liquid agents does not

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Composite aircraft power plants

have any of the disadvantages listed above, but needs 10-15 times more fuel than a turbojet. It becomes evident therefore, that a composite power plant incorporating the positive characteristics of each type of engine used is the answer to the demand for high-altitude aircraft. Various possibilities of improving the efficiency and assembly of compound engines have been suggested. One of the possibilities is the fitting of an afterburner to the ramjet engine. In such a case, speeds four times the speed of sound can be obtained at altitudes of 5,000-6,000 m. Another version is the combination of a ramjet with a rocket engine. The atomized oxygen originating from the combustion products of the rocket, which is fueled by concentrated hydrogen peroxide, enters the combustor of the ramjet where it supports combustion of the fuel. In turbojet-rocket-engine combinations, the turbojet engine is used in the first period of flight subsequent to take-off and in the last period of descent prior to landing at cruising speed which corresponds to 85% of the maximum speed. The rocket engine is used to attain high altitude and climbing speed. In some cases, the rocket engine is the main power plant. In ✓

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Composite aircraft power plants

such cases the aircraft is equipped with a multi-combustor engine to obtain a constant thrust. The tips of aircraft wings are equipped with low-power turbojet engines which insure the flight at cruising speed. The main advantage of such a combination consists in insuring high maneuverability and high speed. The rocket engine used as main power plant, however, has the disadvantage of reduced action radius of the aircraft. Data on a new type of engine, the turbo-rocket, are being published with greater frequency. This type consists of a combination of a rocket and a turbojet engine. In spite of considerable difficulties which arise in the design and construction of composite aircraft power plants, the author believes that such plants will play an important part. There are 5 sketches.

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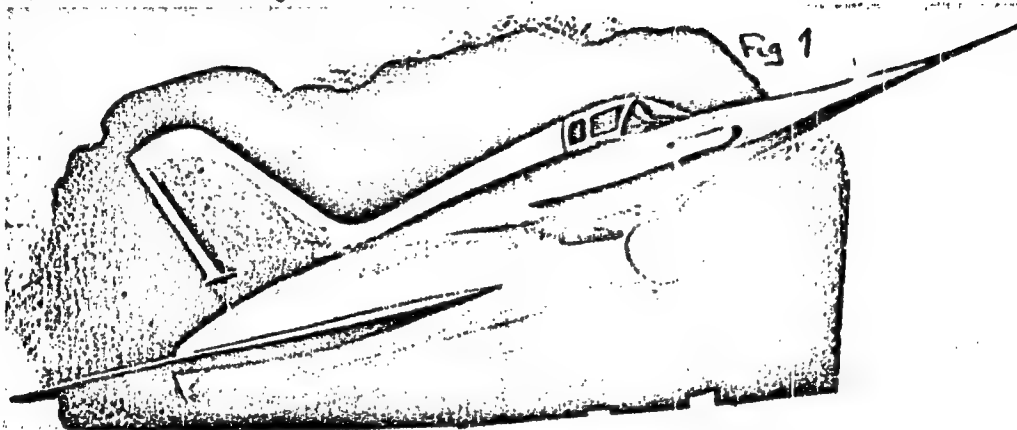
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D015/D105

Composite aircraft power plants

Fig. 1. Experimental supersonic aircraft in which the power plant is a combination of turbojet and rocket engine.

Fig. 1.



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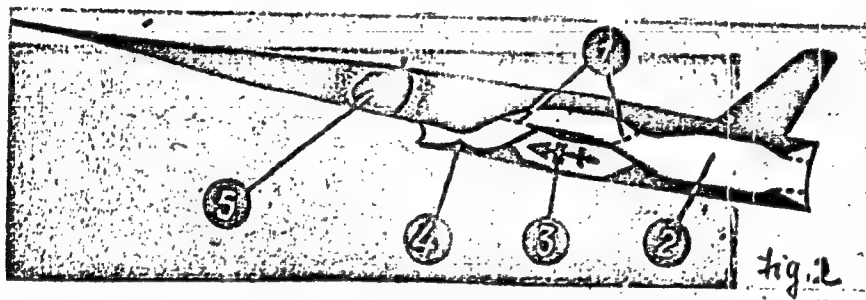
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D015/D105

Composite aircraft power plants

Fig. 2. Supersonic aircraft with a composite turbojet and ramjet engine.

Legend: (1) Valves. (2) Ramjet. (3) Turbojet. (4) Diffuser. (5) Reserve tank.

Fig. 2.



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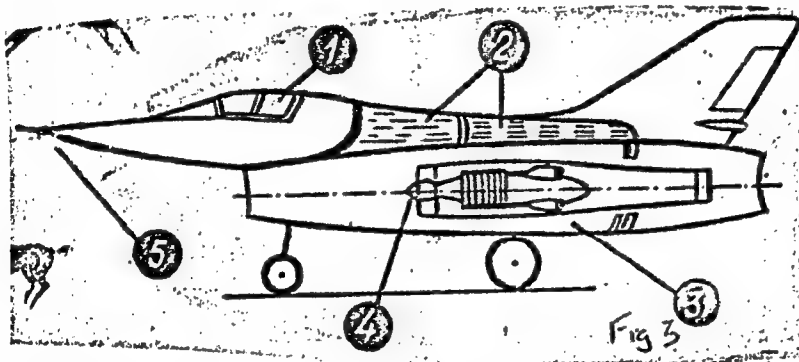
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Composite aircraft power plants

Fig. 3. Scheme of an experimental aircraft with a turbojet and ramjet engine.

Legend: (1) Cabin. (2) Fuel. (3) Ramjet. (4) Turbojet. (5) Shock-wave
breaker.

Fig. 3.



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Composite aircraft power plants

Fig. 4. Turbocompound engine.

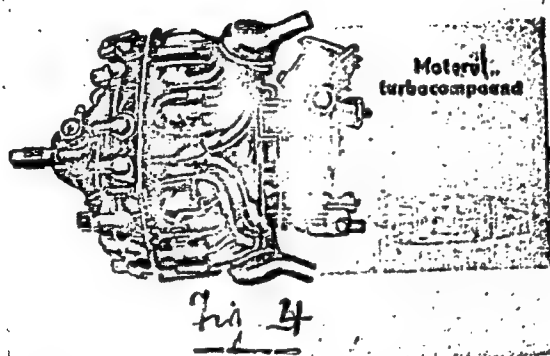


Fig. 4.

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3(7) 29(1)
10(6)(7)

RUM/2-11-1-6/43

AUTHOR: Zăgănescu, Florin, Engineer

TITLE: Flight at Hypersonic Speeds (Zborul cu viteze hiper-sonice)

PERIODICAL: Stiință și Tehnică, 1959, Seria a II-a, Vol 11, Nr 1, pp 11 - 13 (RUM)

ABSTRACT: The author mentions statements of academicians L. Sedov and A. Nesmeyanov that "the time when manned space ships will be sent on interplanetary flights is not far off" and "the solution of various problems such as the creation of permanent, controlled satellites, their return journey to the Earth, and rocket flights to the Moon and the nearest planets, is a part of the program of USSR astronautical research activities for the near future". Stable hypersonic aerodynamic flight could be achieved within a "corridor", the upper limit of which would be determined by a zone within which weight would be equaled by the bearing force

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RUM/2-11-1-6/43

Flight at Hypersonic Speeds

plus the traction force, and extend up to the primary cosmic speed (8 km per second). The lower limit of the corridor would be limited by a zone within which friction temperature attains approximately 1,000°C which is the maximum tolerated by the skin of the flying body. To solve the problem of hypersonic flight, including safe landing on the earth's surface, the corridor would have to be extended by devising adequate trajectories and by using materials that are highly resistant to very high temperatures. Ballistic rockets fly at very high speeds and great altitudes; thus, a ballistic rocket having an action radius of 9,650 km reaches 7.16 kps and attains an altitude of 1,320 km. Other types of hypersonic craft with high-action radius are: the ricocheting rocket, and the winged glider rocket which was designated as "rocketplane" by Soviet engineer Aleksandrov. The latter consists of the second stage of a two-

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RUM/2-11-1-6/43

Flight at Hypersonic Speeds

stage rocket, and has an empennage in addition to the wings. The first stage would boost the rocket to altitudes of 500 to 600 km where the rocket glider could attain the first cosmic speed. The rocket glider carries sufficient power reserves to break away from its orbit and return to earth in a gliding flight on a tangential trajectory after the wing surface has been modified. The ricocheting rocket consists of the top stage of a multi-stage ballistic rocket and uses the ricocheting effect within the dense strata of the atmosphere to increase its action radius when it returns from the stratosphere. At present, however, the winged rocket glider seems to be the only acceptable hypersonic vehicle since it can be guided during its descent trajectory, which makes it possible to select a return route with minimum aerodynamic heat. This fact is important since this type of rocket attains speeds up to

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RUM/2-11-1-6/43

Flight at Hypersonic Speeds

16,000 kph at altitudes around 40 km. The author describes two possible future types of hypersonic craft. The hypersonic glider consists of a three-stage rocket, the top stage of which has a large-angle, arrow-shaped wing. It can leave its orbit and return to earth. It would be manned by a crew of five. Its total weight would be 450 tons, and the load on the wings would be 54 kg per m². The other type is a so-called cosmic disk to be used for interplanetary flight, which would re-enter the atmosphere on a tangential trajectory with minimum aerodynamic heat.

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29(1)

RUM/2-11-9-40/42

AUTHOR: Zăgănescu, Fl., Engineer

TITLE: Millions of Horsepower

PERIODICAL: Știință și Tehnică, Seria a II-a, Vol 11, Nr 9, Supplement, p 2, col 5 (RUM)

ABSTRACT: Briefly mentioning the Soviet artificial satellites and space rockets, the author describes the modus operandi of a liquid-fueled rocket engine. He also assumes that Soviet scientists used for the second space rocket high-quality chemical fuel, able to develop an exhaust speed of over 3 km/sec. It must also have used high-quality heat-resistant materials. Considering that the last Soviet space rocket consisted of 4 stages, the weight of the fuel per stage represented an average of 80% of the total weight of the respective stage. The remaining 20% included the frame structure, engines, fuel tanks, auxiliary installations, etc. Also considering that the rocket was propelled by fuels giving an exhaust speed of over 3 km/sec, and a ✓

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Millions of Horsepower

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total starting weight of 100 tons, the last stage weighed 7 tons. The author describes the following 2 possibilities: 1) total weight: 100 tons; number of stages: 4; stage I - 55 tons; stage II - 25 tons; stage III - 13 tons; stage IV - 7 tons; exhaust velocity - 3.1 km/sec; and 2) total weight: 100 tons; number of stages: 4; stage I - 60 tons; stage II - 21 tons; stage III - 12 tons; stage IV - 7 tons; exhaust velocity - 3.2 km/sec. Using the mass ratio formula given by Tsiolkovskiy, the partial and final performance of a rocket similar to the rockets used on 2 January and 12 September, can be determined. Their values are shown by the enclosed table. These 2 rockets could have been used for launching a 6-ton satellite. The second possibility supplies a final speed of 11.22 km/sec, which is very close to the real value. The advantage of large artificial satellites for future Moon trips is well known. Already possessing an initial speed of 8 km/sec, the rocket only needs a boost of 3.2 km/sec to reach the Moon. Using a chemical fuel which develops an exhaust speed of 3.2 km/sec, the rocket only needs ✓

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Millions of Horsepower

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10 tons of fuel to overcome the Earth's gravitational pull with 1 ton payload and 5 tons deadweight. It is possible to send a remote-controlled unmanned rocket to the Moon, which would first photograph the Moon's surface and then return to the Earth, or orbit the Moon as a satellite. A 600-ton, 3-stage manned Moon-rocket would carry a crew of 4 and 1 ton payload, moving on a transfer orbit to bisect the circular orbits of the Earth and the Moon. The 27 engines would use chemical fuel composed of boron and fluorine, and the last stage would weigh 150 tons when starting back from the Moon. There is 1 table. ✓

Card 3/3

ZAGANESCU, M.; SALCEANU, C.

Experimental study on the elastic extension of metallic wires. p. 75

Academia Republicii Populare Romine. Baza de Cercetari Stiintifice,
Timisoara. STUDII SI CERCETARI STIINTIFICE. SERIA I: STIINTE MATEMATICE,
FIZICE, CHIMICE SI TEHNICE.
Vol. 2, No. 1/4, Jan./Dec. 1955

Timisoara, Rumania

SOURCE: East European List (EEAL) Library of
Congress, Vol. 6, No. 1, January 1957

ZAGANESCU, H.

Associated operators of multipositional elements. Comunicarile
AR 12 no.5:519-524, My '62.

1. Comunicare prezentata de academician Gr. C. Moisil.

ZAGANESCU, Mihai

~~SURNAME, Given Names~~

Country: Rumania

Academic Degrees: -Engineer-

Affiliations: -not given-

Sources: Bucharest, Stiinta si Tehnica, Vol XIII, No 12, Dec 1961, pp 14-15.

Data: "The Moscow-Baical Main Railway Line."

CP 901643

ZAGANESCU, M.

A generalization of dispersion relations. Studii fiz tehn Iasi 11
no.2:171-174 '60.

(Particle size determination) (Quantum theory)

ZAGANESCU, M.

Some new properties of the Dirac bilinear forms. Studii cerc fiz
II no.2: 521-528 '60. (EIAI 10:2)

1. Institutul pedagogic Timisoara.
(Forms (Mathematics)) (Potential, Theory of)
(Harmonic functions) (Particles)

Zăgănescu, M. Quantification de l'espace à cinq dimensions. Acad. R. P. Roum. Bul. Şti. Sect. Şti. Mat. Fiz. 8 (1956), 715-722. (Romanian. Russian and French summaries)

"On montre qu'un schéma correct de l'espace-temps quantifié ne peut être obtenu que si l'on quantifie en plus une autre grandeur, qui peut être interprétée comme la cinquième coordonnée spatio-temporelle. Le réseau 5-dimensionnel est invariant par rapport à un certain groupe de rotations de l'espace à 5 dimensions. Dans le cas le plus simple, tridimensionnel, ce groupe est homomorphe du groupe modulaire, connu de la théorie des fonctions elliptiques.

Dans le cas du mouvement de l'électron dans un champ électromagnétique et un champ gravitationnel, on peut prendre le temps propre comme 5 coordonnée. La quantification du temps propre mène à une équation de mouvement analogue à celle qu'on obtient de la théorie du champ auxiliaire." (Résumé de l'auteur.)

A. G. Walker (Liverpool)

ROMANIA/Theoretical Physics -- Theory of Relativity. Unified Field Theory 1-2

Abstr Jour : Ref Zhur - Fizika, No 5, 1959, No 9801

Author : Zaganescu M.

Inst : Faculty of Mathematics and Physics, Timisoara, Romania

Title : The Hodograph of Motion of a Material Point in Relativistic Mechanics.

Orig Pub : Ann. Physik, 1958, 1, No 6-8, 424-428

Abstract : Relativistic equations of a material point are described in velocity space. A general equation of the hodograph is obtained and a particular case of plane motion under the influence of a constant force is examined. -- Ya.I. Pugachev

Card : 1/1

VOLKOBOY, M.F., prof.; ZAGANYAYLO, V.O. [Zahaniailo, V.O.]; KOKSHA, N.G.
[Koksha, N.H.]; KISLITSKIY, Ya.P. [Kyslyts'kyi, IA.P.]

Using meat industry wastes for the production of feeds. Khar.prom.
no.4:55-59 O-D '62. (MIRA 16:1)

1. Ukrainskiy nauchno-issledovatel'skiy institut myasomolochnoy
promyshlennosti Gosplana UkrSSR.

(Feeds)

I 08430-62 EWT(m)/EWP(t)/ETI LJP(c) JD/WJ/JG/GD
AC NR: AT6034355

SOURCE CODE: UR/0000/66/000/000/0114/0121

AUTHOR: Sandulova, A. V.; Mar'yamova, I. I.; Zaganyach, Yu. I. 58
55
B21

ORG: L'vov Polytechnical Institute (L'vovskiy politekhnicheskii institut) 6

TITLE: Piezoresistance properties of acicular and filamentary single crystals of silicon

SOURCE: AN UkrSSR. Poluprovodnikovaya tekhnika i mikroelektronika (Semiconductor engineering and microelectronics). Kiev, Naukova dumka, 1966, 114-121 27

TOPIC TAGS: strain gage, pressure transducer, piezoelectric crystal, piezoresistance effect

ABSTRACT: The piezoresistance properties of acicular and filamentary single crystals of silicon were investigated. The crystals were grown from gaseous silicon in the presence of Br_2 solvent; p-type crystals were obtained by Br and Al doping and n-type, by As doping. The contacts were made by welding gold, silver, or platinum microwire (20 to 100 μ) to the end of the crystals. To produce tensile or compressive strain in the sample, it was glued to the upper or lower surface of a beam which was periodically bent (in the vertical plane) by

Card 1/2

L 08430-67

ACC NR: AT6034355

3
a special device. The precisely measured beam deflection was used for calculation of strain in the sample. The resistance variation of the samples was measured using an MOD-58 d-c bridge together with an EPP-09-M1 recording potentiometer. The strain-to-resistance relation is linear for both types of crystal and both types of strain in the 1.10^{-4} — 8.10^{-4} strain variation range. High-output signals (40—80 mv) from this crystal can be recorded without amplification. The sensitivity of the p-type crystal sensor is 50—70 times higher than that of metallic crystal sensors. The sensitivity of n-type crystals is low. Orig. art. has: 2 formulas and 8 figures.

SUB CODE: 09, ²⁰21/ SUBM DATE: Dec64/ ORIG REF: 003/ OTH REF: 012/
ATD PRESS: 5103

Card 2/2 1c

ZACAR, B.

Organization and tasks of staffs in forestry. p. 125.

NOVA PROIZVODNJA. (Zveza drustev inženirjev in tehnikov LRS)
Ljubljana, Yugoslavia. Vol. 10, no. 2, Apr. 1959.

Monthly list of the East European Accessions (EEAI) LC, Vol. 8, no. 6, Aug. 1959.

Uncl.

FUKARAK, P.; ZAFAR, J.; MESTROVIC, S.; KLEPAC, D.; LNEK, Z.; ZMIJANAC, D.;
SEVNIK, F.; ZAGAR, B.; MIKLAVZIC, J.; KNEZ, A.; PIPAN, R.; FUNKL, L.;
SVETLICIC, A.; ZUMER, L.; KEVO, R.

Review of periodicals; silviculture. Bul se Young 9 no.4/5:144-
145 Ag-O '64.

ZAGAR, Ciril, ing., prof. (Ljubljana, Vegova ulica 4)

The vacuum impregnation of transformers. Elektr vest 27 no.11/12:
375-376 N-D '59. (EEAI 10:1)
(Electric transformers) (Vacuum)

ZAGAR, Demir, inz.

Influence of temperature and pressure on the absorption
process in the casing-head gas at the Klostar Gas Plant.
Nafta Jug 13 no. 11/12:427-434 H-D '62.

1. Naftaplin, Zagreb.

ZAGAR, Damir, inz.

Influence of temperature and pressure on the adsorption process
casing-head gas at the Klostar Gas Plant. Nafta Jug 13 no.11/12:
427-434 N-D '62.

1. Naftaplin, Zagreb.

ZAGAR, Franc, inz.

All Yugoslavia is a solid economic entity. Autokratika 3 no.6:397
D '62.

ZAGAR, M.

GEOGRAPHY & GEOLOGY

ZAGAR, M. Geography of the burg of Sentjur. p. 263. Vol. 27/28,
1955/56 (published 1957).

Monthly List of East European Accessions (EEAI) Vol. 11, No. 2.
April 1959 Unclass.

ZAGAR, P.

A new antimagnetic mine. p. 533.
(GLASNIK, Vol. 5, No. 7, July 1957)

SO: Monthly List of East European Accessions (EEAL) LC Vol. 6, No. 12, Dec. 1957
Uncl.

ZAGAR, P.

"A new anti-infantry fragmentation mine."

p. 835 (Vojno-Tehnicki Glasnik) Vol. 5, no. 11, Nov. 1957
Belgrade, Yugoslavia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

ZAGAR, Z.

Antibiogram. Liječn. vjesn. 84 no.6:589-590 '62.
(ANTIBIOTICS pharmacol)

TOMIC-KAROVIC, Krunoslav; SKALOVA, Radmila; ZAGAR, Zivojin; UNJCIC, Renka;
VCDOPAJA, Alenka

The problem and appearance of resistance strains of Staphylococcus
pyogenes. Rad. med. fak. Zagreb 8 no.1:5-25 '60.
(STAPHYLOCOCCUS pharmacol) (ANTIBIOTICS pharmacol)

ZAGAR, Zvonimir, inz.

From the activities of the Society of Construction Engineers and
Technicians of Croatia. Gradevinar 15 no.2:62-66 Fe '63.

ZAGAR, Zivojin, dr.

Bacteriological examination of sputum with special reference to the pathogenic role of the most-frequently isolated micro-organisms. Liječn. vješt. 85 no.4:409-414 '63.

1. Iz odjela za bakteriologiju i parazitologiju Skole narodnog zdravlja "A. Stampar" Medicinskog fakulteta u Zagrebu.

(SPUTUM) (STAPHYLOCOCCUS)
(STREPTOCOCCUS PYOGENES) (KLEBSIELLA)
(HAEMOPHILUS) (MORAXELLA)
(ESCHERICHIA COLI)

S

ZAGAR, Zivojin, dr

New antibiotics and their use in human medicine. Med. glas. 15 no.
12/12a:428-433 D '61.

1. Odjel za bakteriologiju i parazitologiju Skole narodnog zdravlja
"A. Stampar" Medicinskog fakulteta Sveucilista u Zagrebu.

(ANTIBIOTICS ther)

S

ZAGAR, Z.

Clinico-bacteriological aspects of chronic bronchitis.
Liječn. vjesn. 87 no.2:209-211 F '65.

YUGOSLAVIA

ZAGAR, Dr Zivojin, Department of Bacteriology and Parasitology (Odjel za Bakteriologiju i Parazitologiju), A. Stampar. Public Health School (Skola Narodnog Zdravlja "A. Stampar"), Faculty of Medicine (Medicinski Fakultet), Zagreb.

"The Bacteriological Examination of Sputum in the Light of the Pathogenic Role of the Microorganisms Most Commonly Isolated."

Zagreb, Lijecknicki Vjesnik, Vol 85, No 4, April 1963, pp 409-414.

Abstract: /Author's English summary modified/ The authors discuss the problem of sputum sampling and the bacteriological examination of such samples, as well as the interpretation of the bacteriological results. The most common bacteria of the respiratory tract are divided into three groups, viz., predominantly pathogenic, predominantly potentially pathogenic, and predominantly apathogenic. 1/1/ Table, 23 Western and Yugoslav references.

ZAGAR, Zivojin, dr.: UGBICIO, Irena, dr.

Analysis of the resistance of staphylococci during the last four years. Med. glasnik 13 no.7:360-363 JI '59.

1. Zavod za mikrobiologiju i parasitologiju Skole narodnog zdravlja
"Andrija Stampar" Medicinskog fakulteta u Zagrebu, Predstojnik:
prof. dr Dora Filipovic.

(STAPHYLOCOCCUS pharmacol.)

(ANTIBIOTICS pharmacol.)

JUNG, M.; CEKIC, J.; ZAGAR, Z.

Preservation of live pathogenic bacteria dried in vacuum in a low temperature. Higijena, Beogr. 12 no.2/3:226-230 '60.
(BACTERIA)

ZAGAR, Zivojin, dr.

Laboratory investigations and principles for the clinical use of
nitrofurantoin. Liječn. vjesn. 84 no.4:339-344 '62.

1. Iz Odjela za bakteriologiju i parasitologiju Skole narodnog zdravlja
"A. Stampar" Medicinskog fakulteta u Zagrebu.

(NITROFURANS ther)

ZAGARINSKAYA, L. A.

Zagarinskaya, L. A. "Investigation of the method of peresterification of cotton-seed oil", Nauch. trudy (Mosk. gosigr. in-t), Collection 1, 1948, 178-86.

So: U-3261, 10 April 53, (Lotopis 'Zhurnal 'nykh Statey, No. 12, 1949).

BEREZIN, Boris Ivanovich; ZAGARINSKAYA, Lyudmila Aleksandrovna; SARKHINA,
M.Ye.; ALEKSANDROV, V.I., tekhn.red.

[Printing materials] Poligraficheskie materialy. Moskva, Gos.
izd-vo "Iskusstvo," 1955. 618 p. (MIFA 12:3)
(Printing machinery and supplies)
(Bookbinding--Equipment and supplies)

~~ZAGARINSKAYA, T.A.~~
YESIPENKO, Vladimir Maymovich, inzh.; POTEMKIN, Dmitriy Mikhaylovich, kand.
tekhn.nauk; ZAGARINSKAYA, T.A., retsenzent; LIPKOV, I.A., nauchnyy
red.; MINAYEVA, T.M., red.; KHAENIN, M.F., tekhn.red.

[Cardigan stitch and reversible machines and the technology of
weaving outer garments] Fangovye i oborotnye mashiny i tekhnologiya
verkhnego trikotazha. Moskva, Gos.nauchno-tekhn.isd-vo lit-ry po
legkoi promyshl., 1958. 408 p. (MIRA 11:5)
(Knitting machines)

DIDENKO, K.I., kand. tekhn. nauk; GAFANOVICH, M.D.; ZAGARIY, G.I.; ABUGOV,
Yu.O.; SHRAMKO, K.N.

Electric regulator of a ferrodynamic system. Avt. 1 prib. no. 4:
64-66 O-D '64 (MIRA 18:2)

VASIL'YEV, V.G.; IVANOV, A.P.; VOSTRYAKOV, O.I.; SHMITEL'SKIY, V.N.;
GAFANOVICH, M.D.; DIDENKO, K.I.; ABUGOV, Yu.O.; SHRAMKO, K.N.;
ZAGARIY, G.I.; DUDCHENKO-DUDKO, V.M.; NIKULIN, Yu.Ya.;
YEFIMOV, Yu.N.; BYKOV, V.L.

Inventions. Avt. 1 prib. no.4:73-74 O-D '64 (MIRA 18:2)

ACC NR: AP7001824

SOURCE CODE: UR/0119/56/000/012/0012/0014

AUTHOR: Abugov, Yu. O. (Engineer); Gafanovich, M. D. (Engineer); Zagariy, G. I. (Engineer); Shramko, K. N. (Engineer); Didenko, K. I. (Candidate of technical sciences)

ORG: none

TITLE: Proportional-plus-integral regulator with nonlinear integrating action

SOURCE: Prihorostroyeniye, no. 12, 1966, 12-14

TOPIC TAGS: nonlinear control system .integration

ABSTRACT: A proportional-plus-integral regulator serially produced since 1965 is described in which the duration of integration is inversely related to the magnitude of the error signal. The block diagram of the regulator (see Fig. 1) has an analog

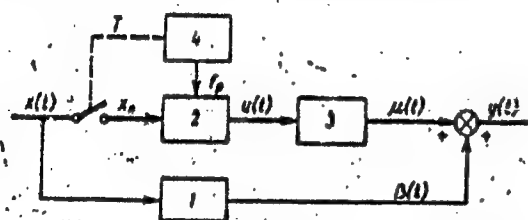


Fig. 1. Nonlinear proportional-plus-integral regulator.

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UDC: 621.3.078

ACC NR: AP7001824

proportional branch (1) and a discrete integral branch which consists of a pulse width modulator with coarse quantization (2) and an integrating reluctance motor (3) in addition to a unit which establishes the integration time. The integrator speeds up integration time considerably if the error signal exceeds 10%. Thus if error is in the ranges $10 \leq x \leq 20\%$, $2 \leq x < 10\%$, and $0.5 \leq x < 2\%$ of the maximum signal, the integration time is correspondingly reduced by 4, 8, and 16 times in comparison to the integration time corresponding to $x > 20\%$. Regulation time is 1.6—2 times less than that required by the linear proportional-plus-integral regulator. The transient process lasts approximately 80 sec as compared to 1300 sec for the linear regulator. The regulator characteristics are: range of gain adjustment, 0.1—50; range of integration time variation, 20—20,000 sec; input and output signals, both 0—2 v, to 50 cps; weight, approximately 12 kg; and size, 280 x 184 x 220 mm. Allowable temperature and humidity ranges are 0—50C and up to 80% respectively. Orig. art. has: 13 formulas and 7 figures. (BD)

SUB CODE: 09/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 001/
ATD PRESS: 5110

Card 2/2

ZAGARIY, L.B.; KARDONSKIY, V.M.

Transmitted beam in the case of anomalous X-ray absorption.
Kristallografiia 8 no.2:263-264 Mr-Apr '63. (MIRA 17:8)

1. Institut metallovedeniya i fiziki metallov Tsentral'nogo
nauchno-issledovatel'skogo instituta chernoy metallurgii imeni
Bardina.

ZAGARMISTR, A. M. "

Zagarmistr, A. M. "Electric depth sounding," Prikl. geofizika, Issue 5, 1948, p. 54-72

SO: U-3642 10 April, 1953 (Letopis 'Zhurnal 'nykh Statey, no.c, 1949)

ZAGARMISTR, A.M.

REZNIK, A.M. (brigadir), AREST, V.I., BLOKH, I.M., KIKGOF, Yu.A.,
ZAGARMISTR, A.M., KUPALOV-YAROPOLK, I.K., PETROV, L.V., TYABIN, V.Ye.,
FEDORENKO, A.N., sostaviteli; DYUKOV, A.I., ELESCHCHEV, A.I., redaktory.

[All-Union unified norms for geophysical field work] Vsesoyuznye
edinye normy vyrabotki na polevye geofizicheskie raboty. [Sostavi-
teli: Reznik A.M. i dr. Redaktory: A.I.Dyukov, A.I.Eleshchov] Mo-
skva, Gos. nauchno-tekhn. izd-vo neftianoi i gorno-toplivnoi lit-ry,
1951. 146 p.

(MLHA 7:4)
(Geophysics)

ZAGARMISTE, A.M.

KALINOV, Yevgeniy Nikolayevich; ZAGARMISTE, A.M., red.; PERSHINA, Ye.G.,
vedushchiy red.; POLOSINA, A.S., tekhn. red.

[Interpretation of vertical electric logging graphs]. Interpretatsiya
krivyykh vertikal'nogo elektricheskogo zondirovaniya. Moskva, Gos.
nauchno-tekhn. izd-vo neft, i gorno-toplivnoi lit-ry, 1957. 471 p.
(Moscow, Vsesoiuznyi nauchno-issledovatel'skii institut geofiziches-
skikh metodov razvedki. Trudy, no.1). (MIRA 11:1)

(Prospecting—Geophysical methods)

ZAGARMISTER, A.M.

Utilization of increased-resolution dipole-axial sounding in
probing H-type cross sections. Prikl. geofiz. no.16:130-144
'57. (MLRA 10:8)
(Prospecting--Geophysical methods)

ZAGARMISTR, A.M.
ZAGARMISTR, A.M.

Evaluation of the screening effect of high-resistance strata in
vertical electrical prospecting. Prikl.geofiz. no.17:147-151 '57.
(MIRA 11:2)

(Prospecting--Geophysical methods)

ZAGABNISTE, A.M.
ALEKSEYEV, A.M.; BERDICHEVSKIY, M.N.; ZAGABNISTE, A.M.

Use of new methods in electric prospecting in Siberia. Prikl. geofiz.
no.18:103-127 '58. (MIRA 11:5)

(Siberia—Prospecting—Geophysical methods)

ZAGARMISTR, A-M.

PHASE I BOOK EXPLOITATION 1031

Prikladnaya geofizika; sbornik statey, vyp. 19 (Applied Geophysics; Collection of Articles, Nr. 19) Moscow, Gostoptekhhizdat, 1958.
253 p. 3,000 copies printed.

Sponsoring Agency: Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki

Ed. Bogdanov, A.I.; Executive Ed.: Dobrynina, N.P.; Tech. Ed.: Polosina, A.S.

PURPOSE: This collection of articles is intended for professional geophysicists engaged in scientific research or working in industrial enterprises.

COVERAGE: The articles are devoted to a discussion of methods of interpreting various types of electrical logs, methods of determining the porosity, permeability, and specific surface characteristics

Card 1/4

Applied Geophysics (Cont.) 1031

of water bearing rocks, and methods of determining the physical properties of sediments and the characteristics of various physical parameters. A description of piezoelectric pressure recorders used in seismic exploration is also given. The articles are accompanied by graphs, tables, and bibliographic references.

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Card 2/4

Applied Geophysics (Cont.) 1031

Faradzhev, A.S. Investigating the Effects of Non-horizontal Plane
Boundaries on Electro-logs 109

Shapiro, D.A. Discussion of Theoretical Problems on Diffusion-
adsorption Potentials (Diaphragms) in Boreholes 129

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Specific Resistivity per Unit Area of Water Conducting Surfaces
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Keyvsar, Z.I. Relationship Between Relative Resistivity, Porosity,
Permeability and Specific Surface 186

Avchyan, G.M. Determining Magnetic Susceptibility with Dolginov's
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Kalinina, R.V. The Correlation Between the Velocity of Propaga-
tion of Elastic Waves and the Relative Elastic Constants of Rocks 216

Card 3/4

Applied Geophysics (Cont.) 1031

Filippov, Ye.M. Investigation of the Diffused Spectrum of Gamma
Radiation in Rocks of Different Mineralogical Composition and
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Veselov, K.Ye. Golomb, V.E., Kalisheva, L.V., Kudymov, B.Ya.,
Lozinskaya, A.I. Review of P.I. Lukavchenko's "Gravimetric Ex-
ploration for Oil and Gas" 245

AVAILABLE: Library of Congress

Card 4/4

MM/sfm
1-22-59

BLOKH, I.M.; ZAGARMISTR, A.M.; PARADZHEV, A.S.

Guard electrode method and its use in mapping coal seams.

Razved. i okh.nedr 24 no.10:34-39 0 '58. (MIRA 12:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy ugol'nyy institut
(for Blokh) 2. Vsesoyuznyy nauchno-issledovatel'skiy institut
geofiziki (for Zagarmistr, Paradshov).

(Prospecting--Geophysical methods) (Coal geology--Maps)

ZAGARMISTR, A.M.; BREDICHEVSKIY, M.N.

Using the telluric current method in electric prospecting. Geol.
nefti i gaza 3 no.1:38-47 Ja '59. (MIRA 12:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut Geofizika.
(Prospecting) (Electric currents)

ZAGARMISTR. A.M.; FARADZHEV, A.S.

Use of three-electrode apparatus with a shielded electrode in mapping highly conductive coal seams. Razved. i okh. nedr 26 no.4:35-38 Ap '60. (MIRA 15:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki.

(Coal geology—Maps)

(Electric prospecting—Equipment and supplies)

ZAGARMISTR, A.M. [deceased], VAN'YAN, L.L.; KOROL'KOV, Yu.S.; TEREMHIN, Ye.I.

Electric prospecting by the field production method. Izv. vys.
ucheb. zav.; geol. i razv. 6 no.9:120-132 S '63.

(MIRA 17:10)

1. Novosibirskiy institut geologii i geofiziki Sibirskogo
otdeleniya AN SSSR.

KISLITSYN, A.N.; TISHCHENKO, D.V.; ADEL', I.B.; ZAGARMISTR, O.S.

Drilling fluid viscosity reducers from wood tar pitch. Izv. vys.
ucheb. zav.; neft' i gaz 3 no.8:21-26 '60. (MIRA 14:4)

1. Lesotekhnicheskaya akademiya i Vsesoyuznyy nauchno-issledovatel'skiy
institut burovoy tekhniki.
(Oil well drilling fluids) (Viscosity)

TISHCHENKO, D.V.; KISLITSYN, A.N.; ZAGARMISTR, O.S.; Prinimali uchastiyey:
VAPYSHEVA, K.M., mladshiy nauchnyy sotrudnik; MITRYAKOVA, L.Kh.;
SEMEKOVA, A.A., mladshiy nauchnyy sotrudnik

Using phenylic acids of wood tar pitch as raw material for
obtaining viscosity reducers. Sbor.trud.TSNILKHI no.14.16-52 '61.
(MIRA 16:4)

1. Starshiy tekhnik laboratorii drevesnykh smol TSentral'nogo
nauchno-issledovatel'skogo i proyektного instituta lesokhimicheskoy
promyshlennosti (for Mitryakova). 2. Vsesoyuznyy nauchno-
issledovatel'skiy institut burovoy tekhniki (for Semenova).
(Wood tar) (Phenols)
(Chemical tests and reagents)

ZHIGACH, K.F., doktor khim.nauk; ADEL', I.B., kand.tekhn.nauk;
ZAGARMISER, O.S., inzh.

New viscosity reducers for drilling muds. Trudy VNIIST no.1:
142-156 '58. (MIRA 11:12)
(Clay) (Viscosity)

Zagaymistr, O.S.

Viscosity reducers for weighted clay suspensions. K. F. Zagaymistr, I. B. Anis, and D. S. Zagaymistr. *Neftekhim. Khim. 24, No. 3, 23-24 (1963)*.—Queltricho and willow exts. and "sintans" were used to lower the viscosity of weighted drilling fluids; the sintans are sulfonation products of phenol and aromatic hydrocarbons contg. several benzene rings linked by CH₂ groups. Tannin ext. and sintans were found most effective for lowering the viscosity at given hematite requirements for sp. gr. adjustment. The viscosity regulators were also found effective as emulsion stabilizers, especially in the presence of some alkali. W. M. S.

(3)

ZAGARMISTR, O.S.; BALAYAN, L.J.

Field tests of the "PL" sulfurized phenol as a viscosity reducer
of heavy drilling fluids. Azerb.neft.khoz. 35 no.5:18-20 My '56.
(MLRA 9:10)

(Oil well drilling fluids) (Phenols)

SHORYGINA, N.N.; IZUMRUDOVA, T.V.; ADEL', I.B.; ZAGARMISTR, O.S.
SALOMATINA, Z.T.

Prospects for the use of hydrolytic lignin in the petroleum
industry. Gidroliz. i lesokhim. prom. 14 no. 1:5-6 '61.

(MIRA 14:1)

(Lignin)

(Petroleum industry)

L 42985-66 EWP(m)/EWT(1)

ACC NR: AP6012155

SOURCE CODE: UR/0413/66/000/007/0072/0072

INVENTOR: Festenshteyn, M. S.; Krysin, Yu. P.; Zagarov, V. V.

ORG: none

TITLE: Device for testing samples of materials for thermal shock. Class 42,
No. 180388 10

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 7, 1966,
72-73

TOPIC TAGS: thermal fatigue, fatigue test, combustion chamber, material testing

ABSTRACT: An Author Certificate has been issued describing a device for testing samples of materials for thermal shock in gas flow. The device contains a combustion chamber with a programming element for controlling the supply of fuel to the combustion chamber. To determine the resistivity of samples to thermal fatigue due to thermal overload alternating with time, the actuating mechanism of the programming element is designed in the shape of a slide valve arrangement with a camshaft-type electromechanical gear (see Fig. 1). Orig. art. has: 1 figure. [Translation]

[NT]

Card 1/2

UDC: 620.178.38-529

L 42985-66

ACC NR: AP6012155

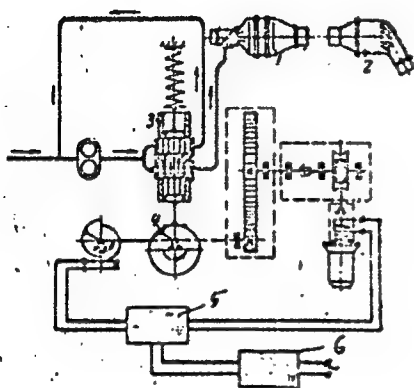


Fig. 1. Device for testing samples of materials for thermal shock.

- 1—Combustion chamber;
- 2—blow-through mechanism;
- 3—slide valve arrangement;
- 4—camshaft gear; 5—time relay; 6—power-supply unit.

SUB CODE: 13/ SUBM DATE: 03Jul64/

Cord 2/2 hs

SYCHEV, M.M.; KRYLOV, O.S.; SITTNER, V.; ZAGAROVA, S.A.

Effect of the composition and structure of vitreous slags in
the system $\text{CaO} - \text{SiO}_2 - \text{FeO} - \text{Al}_2\text{O}_3$ and their binding properties.
Izv. AN SSSR. Neorg. mat. 1 no.11:2039-2043 N '65.

(MIRA 18:12)

1. Leningradskiy tekhnologicheskii institut imeni Lensoвета.
Submitted May 10, 1965.

ZAGARSKAYA, N. I.

Author: N. I. Zagarskaya, P. I. Kaba, S. P. Kopp, I. P. Bizon, A. M. Per-igamov, N. I. Zagarskaya, N. I.

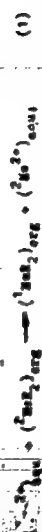
SOV/20-122-5-14-57

Separation of Metals by the Exchange-Extraction Method (Razdeleniye metallov atomov obmennoy ekstraktatsiy)

Periodicals: Khimiya Akademii nauk SSSR, 1958, Vol 122, No 3, pp 445-447 (USSR)

ABSTRACT: An extraction in connection with an exchange reaction between metals in a very productive method of separation of these metals are in different phases: in an organic phase as salts and aliphatic acids and in an aqueous phase as salts of mineral acids (Fig 1). For this purpose saturated aliphatic acids with 5 and more carbon atoms were used. They fulfill a double function: a) they take part in the formation of the corresponding metal salt (complex), and b) they serve as solvent for these salts being formed. Aliphatic acids are used most effectively when there is an inactive solvent with a low specific weight, direct-ions for the preparation of such solutions are mentioned. The exchange reaction between the metals as mentioned earlier can be expressed by the following equation

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In sub. 1 denote the corresponding metal, M_1 - the organic reaction of aliphatic acid $C_nH_{2n+1}COO$. The indices org and aq denote the organic and the aqueous phase. The equilibrium constant of the exchange reaction depends on the character of the exchanging metals, as was confirmed by the experiments. Metals with a small pH value ("acid" metals) mainly pass into the organic phase, metals with a high pH value, however, (more alkaline metals) almost completely (>99%) into the aqueous phase. The "acid" metal is displaced from the organic phase by means of the reaction metal. Separation of the metals is carried out by means of the reaction metal in the organic phase. In the first case (Fig 1) the metal in the organic phase contains a mixture of salts of two metals. The organic phase which contains a mixture of salts of two metals is brought into contact with the organic phase in which a salt of an aliphatic acid of a stronger alkaline metal is contained. In the second case the organic phase which contains a mixture of salts of the aliphatic acids is brought into contact with the aqueous phase which contains a salt of a mineral acid of a

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strong alkaline metal. Table 1 reveals the results of separation of metallic salts combined with sulfuric acid by means of the proposed method. In organic phase a solvent of industrial aliphatic acids of the fraction $C_7 - C_9$ (average molecular weight 128) is petroleum (400 g/liter) was used. Data on table 1 characterizes slight exchange. By using an extraction phase the degree of extraction is considerably increased. If metals were separated from the organic phase into the aqueous phase. There are 2 figures, 1 table, and 1 reference, 1 of which is Soviet.

ASSOCIATION: Metallurgiya, 1958, No 12, p. 445. Metallurgiya (Mordovskaya Metallurgiya Kombinat) N. I. Zagarskaya

May 4, 1958, by S. I. Vol'fovich, Member, Academy of Sciences, USSR

April 12, 1958

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SOV/137-58-7-14074

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p 13 (USSR)

AUTHOR: Zagarskiy, V. S.

TITLE: Treatment of Products of Separation of Copper-nickel Matte
(Pererabotka produktov ot razdeleniya medno-nikelevogo faynshteyna)

PERIODICAL: Materialy Soveshchaniya po vopr. intensiv. i usoversh. dobychi i tekhnol. pererabotki medno-nikelevykh i nikelovykh rud. 1956 g. Moscow, Profizdat, 1957, pp 242-252

ABSTRACT: The following conclusions are drawn from 1951-1953 studies at the Noril'sk Combine on the roasting of Ni concentrate. The roasting of Ni concentrate in multiple-hearth furnaces is more difficult than roasting of ground nickel bottom. The best results are obtained in two-stage roasting. Investigations in sintering roasting were carried out. Roasting in the sintering machine proceeds under favorable conditions: low vacuum, high outgoing gas temperature, high output. To avoid fusion of the sulfides, the process must be conducted so that ≤ 1 kg S burns off per min per m² of grate. When the charge contains 4-5% S, the introduction of 1-1.5% coke breeze has a favorable effect upon the

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Treatment of Products of Separation of Copper-nickel Matte

quality of the oxide and increases sulfur removal. The Ni-concentrate roasting of the sintering machine is described and a flow-sheet therefor is adduced. Conversion to gas heating brought a return to the single-stage roasting procedure, the gas burners being mounted directly on the hearths. The measures that have to be taken in order to roast in multiple-hearth furnaces are indicated. Descriptions are provided of the metallurgical treatment of the Cu concentrate, that of the metallic magnetic fraction, and that of the middling produced in the course of the matte separation.

1. Ores--Processing 2. Sintering furnaces--Applications

A. Sh.

Card 2/2

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